

REMARKS

In view of the above amendments and following remarks, reconsideration of the rejections that are contained in the Office Action of June 24, 2009 is respectfully requested.

In the Office Action, the Examiner again rejected the claims as being anticipated by WO 02/47139 to the Ebara Corporation (the Ebara reference). This reference has been discussed previously, and it is respectfully submitted it still does not anticipate the present invention. This will be discussed in the following.

However, the above amendments have been proposed at this time in order to attempt to facilitate the allowance of this application. Thus, by the above amendments it has been recited that the substrate holder, having the substrate fixing ring, the seal ring and the temporary retaining section, which has the temporary retaining pins which each have the retaining portion, are structured and arranged such that the retaining portion can retain the substrate while vertically moving the substrate holder and such that a gap is formed between the retaining the portion and the substrate by holding the substrate by nipping a peripheral portion of the substrate between the substrate fixing ring and the seal ring. Thus, the claim in effect requires these structural components to be arranged so that the retaining portion not only retains the substrate in response to the vertical movement of the substrate by the substrate holder, but also so that a gap forms between the retaining portion and the substrate in response to the holding of the substrate by nipping a peripheral portion of the substrate between the substrate fixing ring and the seal ring.

In the present invention, as for example illustrated by Fig. 16, the substrate W is first moved by a hand through the gap 158a into position on the retaining pins 194, using the tapered surface thereof to guide the wafer W into position on the retaining portions 194c. Then, the substrate holder 160 is vertically moved to contact the temporary retaining pins 194 with pressing portions 160a. As the substrate holder 160 lowers, the pressing portion 160a of the substrate holder 160 first comes into contact with the upper surface of the retaining pin 194. As it further continues to lower, it presses down the temporary retaining pin 194 against the elastic force of the helical spring 196. The holder 160 continues to lower even after the lower surface of the substrate W comes into contact with the seal ring 192. This causes nipping of the peripheral portion of the substrate W between the seal ring 192 and the substrate fixing ring 200, allowing the seal ring 192 to make pressure contact with the peripheral portion of the front surface or

lower surface of the substrate to seal the peripheral portion. As the substrate holder 160 then continues to further lower, a slight gap G is formed between the substrate W and the retaining portion 194c of the temporary retaining pin 194 so that the substrate W is fixed only by the seal ring 192 and the substrate fixing ring 200. See again Figs. 15 and 16.

Thus, it is clear that the present invention fully supports the claim language that is now presented, requiring that the arrangement be such that the substrate can be vertically moved with the retaining portion retaining the substrate by vertically moving the substrate holder, and such that a gap is formed between the retaining portion and the substrate by holding the substrate by nipping a peripheral portion of the substrate between the substrate fixing ring and the seal ring.

The Ebara reference has been previously discussed. The Examiner cites electric terminals 902 as corresponding to the temporary retaining pins recited in claim 14. These electric terminals 902 do not have a head portion having a tapered surface that is provided so that when placing the substrate on the temporary retaining pins, the tapered surface contacts a peripheral end surface of the substrate and effects positioning of the substrate. Nor do they have a retaining portion that projects outwardly for receiving and retaining a peripheral lower surface of the substrate, particularly in a horizontal direction.

The Examiner took the position that this is, in effect, a matter of intended use, as the reference would be capable of accommodating a substrate having a size in which the peripheral surface would contact the slanted surface of the electrical terminals 902. Even if this point is accepted, however, there is still no retaining portion that projects outwardly for receiving thereon and retaining a peripheral lower surface of the substrate.

Thus, the requirement of claim 14 is that each of the temporary retaining pins has a head portion having a tapered surface and a retaining portion that projects outwardly. In looking at the electrical terminals 902, with the terminal 902 is the head portion, a tapered surface may be seen, but then there is not also a retaining portion that projects outwardly for receiving thereon and retaining a peripheral lower surface of the substrate.

In the Office Action, the Examiner states that “the recitation that . . . the temporary retaining pins also includes a retaining portion projecting outwardly for receiving the peripheral lower surface of the substrate does not structurally further limit the Applicant’s apparatus.” However, while the Examiner’s position that the statement “for receiving the peripheral lower

surface . . .” is understood, clearly the requirement that there be a retaining portion that projects outwardly is a structural limitation. And this limitation has not been met by the reference.

For the above reason, it is respectfully submitted that the rejection must be withdrawn. Nonetheless, proposed above are further structural limitations to help speed the prosecution and obtain the allowance of the present application. Specifically, and as discussed above, a clause has been added that states that the substrate holder having the substrate fixing ring, the seal ring, and the temporary retaining section having the temporary retaining pins, are structured and arranged such that the substrate can be vertically moved with the retaining portion retaining the substrate by vertically moving the substrate holder and such that a gap is formed between the retaining portion and the substrate by holding the substrate by nipping a peripheral portion of the substrate between the substrate fixing ring and the seal ring. This is a structural requirement, and is so-expressed in the claim. Clearly, further, this requirement cannot be met by the Ebara reference, because the cited retaining pins are in fact the electrical terminals that maintain contact, unlike the retaining portion of the present invention.

For the above reasons it is respectfully submitted that claim 14, both in its prior form and as now proposed, clearly defines over the Ebara reference. Indication of such is respectfully requested. Allowance of the application as a whole is further requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicants' undersigned representative.

Respectfully submitted,

Seiji KATSUOKA et al.

/Nils E. Pedersen/

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Nils E. Pedersen
Registration No. 33,145
Attorney for Applicants

NEP/krp
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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